# CLAIMS:

1. A method for profiling a target application running on an informational processor, the method comprising:

using DPCL (Dynamic Probe Class Library) instrumentation for;

selecting at least one function and/or CPU usage in a target application to be traced;

attaching a -p and/or -pg flag to the at least one function or CPU usage; running at least part of the target application; and

writing one or more results of the at least one function and/or CPU usage

- with the attached -p and/or -pg flag in a gmon.out format.
  - 2. The method according to claim 1, wherein the step of running includes changing the selection of the at least one function and/or CPU usage placement in the target application that is already running.

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3. The method according to claim 1, wherein the step of running includes stopping the target application before the completion of the target application.

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4. The method according to claim 1, wherein the step of attaching a -p and/or -pg flag includes adding or deleting at least one -p and/or -pg flag while the target application is running.

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5. The method according to claim 4, the method comprising; analyzing the gmon.out output file with standard characterization tools.

6. The method according to claim 1 wherein the step of attaching a -p and/or -pg flag to the target application includes attaching a -pg flag into the target application program directly and without the use of source code for the target application.

- 7. The method according to claim 6, wherein the step of attaching a -p and/or -pg flag to the target application includes attaching a -pg flag into the target application program directly and without the need to recompile and/or relink the target application.
- 5 8. The method according to claim 1 wherein the step of writing one or more results of the at least one function and/or CPU usage with the attached -p and/or -pg flag in a gmon.out format further comprising;

totaling the at least one function and/or CPU usage with a –p and/or -pg flag into a summary register so as to provide a running total.

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9. A computer readable medium containing programming instructions for profiling a target application running on an informational processor, the program instructions comprising instructions for:

using DPCL (Dynamic Probe Class Library) instrumentation for;

selecting at least one function and/or CPU usage in a target application to be traced;

attaching a -p and/or -pg flag to the at least one function or CPU usage; running at least part of the target application; and writing one or more results of the at least one function and/or CPU usage with the attached -p and/or -pg flag in a gmon.out format.

10. The computer readable medium of claim 9, comprising the instructions for changing the selection of the at least one function and/or CPU usage placement in the target application that is already running.

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- 11. The computer readable medium of claim 9, comprising the instructions for stopping the target application before the completion of the target application.
- 12. The computer readable medium of claim 9, comprising the instructions for attaching a -p and/or -pg flag includes adding or deleting at least one -p and/or -pg flag while the target application is running.
- 13. The computer readable medium of claim 12, comprising the instructions for: analyzing the gmon.out output file with standard characterization tools.

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14. The computer readable medium of claim 9, comprising instructions for attaching a -p and/or -pg flag to the target application includes attaching a -pg flag into the target application program directly and without the use of source code for the target application

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- 15. The computer readable medium of claim 14, comprising instructions for attaching a -p and/or -pg flag to the target application program directly and without the need to recompile and/or relink the target application.
- 5 16. The computer readable medium of claim 9, comprising instructions for writing one or more results of the at least one function and/or CPU usage with the attached -p and/or -pg flag in a gmon.out format further comprising:

totaling the at least one function and/or CPU usage with a –p and/or -pg flag into a summary register so as to provide a running total.

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## **EXPRESS MAIL LABEL NO. EL746146730US**

- 17. A data processing system having at least one processing element running under an operating system comprising:
  - a target application program running under an operating system;
  - a benchmark application for profiling the target application;
- a DPCL diagnostic instrumentation for at least one function and/or CPU usage in which a –p or –pg flag has been attached; and,
  - a output file in a gmon.out file format for collecting the results of the at least one function and/or CPU usage with the attached –p and/or –pg flag attached.
- 10 18. A data processing system according to claim 17, further comprising an input device for control of the DPCL diagnostic instrumentation.
  - 19. A data processing system according to claim 18, further comprising a input device for changing the DPCL diagnostic instrumentation during the operation of the target application.